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ABSTRACT

This study examined faculty perceptions of accessibility and quality of graduate programs offered via the Internet. A total of 25 faculty (38 percent return rate) with experience teaching graduate courses via the Internet completed an e-mailed survey. It was found that half of the respondents had less than one year of experience teaching graduate courses using the Internet, and that nearly all also taught college courses in a traditional classroom setting. The largest groups of respondents taught graduate courses in education (32 percent), communications (20 percent), and the liberal arts or humanities (16 percent). Over two-thirds of the respondents reported that they were satisfied with their preparation time and efforts in teaching via the Internet. Respondents indicated that course or program administration was the most important environmental factor when considering course quality and accessibility. A high level of satisfaction was reported by most of the respondents in regard to the quality of the courses taught via the Internet. Data tables show results of the survey. (Contains 10 references.) (MDM)

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Graduate Education on the Internet: An Issue of Quality and Accessibility

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Running Head: Internet Graduate Programs

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Allen (1994) reported that in 1980 the nontraditional student became the norm in the on-campus college student population in colleges and universities. Nontraditional students are those who are age 25 years or older, attend college on a part-time basis, commute at least 50 miles to college, or possess any combination of these characteristics (Villela & Hu, 1991). Villela and Hu further reported that the growth rate of nontraditional student from 1970 to 1985 was 114% versus 15% for traditional students. Not surprisingly, 80% of all students attending higher education institutions were commuters. Villela and Hu also researched the drop-out rate for nontraditional students, reporting that more than 30% dropped out of courses after enrolling in them. This figure did not distinguish the time at which students withdrew nor the reasons for the withdrawal. Similarly, the figure did not distinguish between graduate and undergraduate students, suggesting that there could be different characteristics in these two groups of students that could affect them differently regarding their ability, desire, or level of persistence in a particular course of study. Collins and Murphy (1987) postulated that the nontraditional student is more autonomous than the traditional student, a ramification that impacts the traditional time on task philosophy for learning. Thus, advances in communications technology can possibly extend educational opportunities and make distance education via Internet a reasonable alternative to the traditional educational delivery system for this special class of autonomous students.

The concept of education utilizing the Internet as a medium has fallen under the general category of distance education or distance learning. Understanding the idea of

distance education is important in understanding how the Internet could be used as an appropriate distribution medium. Distance education has been defined several ways, one of which has referred to it as a way of communicating educational programs to geographically separated groups and individuals (Schrum, 1992). The definition has been further developed to include a separation between teacher and student. This separation requires that the student-teacher communication be conducted through print, broadcasting, telecommunication media, correspondence, audio and video recordings, computers, and various combinations of these media (Moore, 1989).

Rationale of the Study

Increasingly, colleges are offering distance education courses via the Internet. Part of the interest in using the Internet to deliver instruction is that not only text, but graphic images, sound, animations, and even video clips are possible using a part of the Internet known as the World-Wide Web (Deloughry, 1996). Many of these course offerings are at the graduate level (National University Continuing Education Association, 1993). Yet while little, if any, mention is made of the quality of the courses or programs of study, some educational groups such as the Conference of Southern Graduate Schools have begun to be concerned about some of these issues, such as the changing professorate, public trust (accountability issues), and administration and support services (Schmidt, 1996).

The professorate is changing because of this new technology. The way faculty teach has been influenced by the addition of computer and other electronic technology.

Education delivery has become decentralized. The locus of control has been altered from teacher-centered to student-centered. Faculty have been faced with the pressure to change and adapt to this new form of learning. Not only have the faculty had to change attitudes, but their independence has also been threatened. With the inclusion of electronic technology into the curricula, faculty have become more dependent on technical support staff to aid them in their delivery of course information. Terms such as active learning and collaborative learning have begun to enter the educational theoretical jargon. Thus, faculty have also been faced with learning new technology, new ways of learning, and a change in access to faculty and education in terms of time and place (Thompson, 1996).

Eck (1996) was concerned with the issue of accountability. He contended that graduate programs offered via distance education should be of the same quality and have the same entrance requirements as courses offered on main campuses. Accountability has traditionally been responsible to four main groups: students, faculty, the public, and current and future employers. Centering mainly on the student, Eck wrote that courses and requirements should be the same for on-campus and distance education students. He was concerned that faculty who taught graduate courses using distance education should be just as qualified as faculty who taught graduate courses on the main campus. Access to resources such as libraries, advisement, computers, and other on-campus resources was also an area of accountability that he emphasized. Access to a regularly offered set of courses addressed both quality and access questions (Eck, 1996).

Therefore, a study to determine faculty perceptions of accessibility and quality of graduate programs offered via the Internet would serve to answer many of these questions proposed by Eck. This information could then be used to guide college administration and faculty as they attempt to address the needs of an increasing number of nontraditional graduate students.

Research Methods

According to data reported by the Department of Education (1996), the number of potential faculty teaching graduate courses in the United States would number at least 121,000; however, it is not known what percentage of these faculty were teaching courses using the Internet as a primary delivery medium. Because this population was not well defined, the snowballing technique (Bogdan & Biklen, 1982) was used to determine the membership of the sample. In this technique, a select group of faculty was identified as members of the population to be surveyed, and each was asked to recommend others with similar characteristics. Those identified were then asked to recommend others who they knew to have similar characteristics (Bogdan & Biklen, 1982). This technique is designed to be used to generate a reasonable sample when the population is not readily known.

A faculty satisfaction survey instrument was used to obtain data for the study. The questionnaire included three section, the first of which consisted of background demographic data on the participants and their teaching areas. The second section consisted of items concerning quality and access of graduate education, scored on a 1-

to-5 Likert-type scale. The third section collected responses to an open-ended question about potential areas of research in distance education.

The survey technique used in the study was performed almost exclusively through electronic media. The initial communication was in the form of a nomination form sent to faculty and/or administrators who had been identified primarily through interrogating various World Wide Web (WWW) sites on the Internet. Some of these sites were collections of electronic mail addresses (e-mail) of faculty who had put information for class and/or other uses on the Internet. Few references were faculty who taught graduate classes on the Internet. Additional sites investigated included college and university home pages also on the WWW. The nomination form was sent to faculty and administrators by electronic mail. Once the nominations had been obtained, the survey itself was sent via e-mail to the faculty identified. The potential respondents were instructed to return the surveys either by regular U. S. mail, or by return e-mail. A follow-up e-mail message requesting that identified respondents send in the surveys was also sent.

The snowballing technique used to identify potential participants in the study produced 78 potential respondents, and surveys were sent to all of these faculty. A response rate of at least 50% was anticipated, meaning 39 respondents, but two problems arose. First, not all potential respondents received the survey delivered electronically. The e-mail system failed to confirm receipt of 56% of the surveys sent. However, the e-mail system used did not guarantee confirmation when the Internet was used to deliver the e-mail. Therefore, an unknown percentage of the surveys sent may

never have been received. The second problem was associated with changed roles, inaccurate nomination, and incorrect e-mail addresses. With some surveys, although a faculty member had been identified as a potential respondent, the faculty member may not have been eligible. Some replied that they were in administration and did not teach graduate courses; others reported that they taught electronically, but did not teach graduate courses. Still others planned to teach graduate courses electronically, but had not taught graduate courses via the Internet yet. At least one potential respondent did not fill out the survey for "philosophical reasons."

Therefore, the actual number of potential respondents was less than originally identified. The number of surveys returned was 25, corresponding with a return rate of 38%. Because the study was exploratory in nature, and not meant to extrapolate to a larger population, the percentage response rate was determined to be sufficient.

Findings

Who Teaches on the Web?

Half of all respondents had less than one year of experience teaching graduate courses using the Internet, while 42% had 3 or more years experience. The majority of respondents were untenured (54%; n-13), and nearly all (89%) also taught college courses in a traditional classroom setting. The majority of the respondents taught graduate courses in education (32%), and other primary teaching areas included communications (20%), the liberal arts or humanities (16%), business or commerce (12%), and agriculture, math, and science (each with 4%).

Over two-thirds (78%) of the faculty reported they agreed or strongly agreed (39% each) that they were satisfied with their preparation time and efforts to teaching via the Internet. Another 13% reported that they did not feel prepared to teach using the Internet.

Participants were asked to indicate the environmental factor most important in developing a course for delivery via the Internet. Respondents indicated that course or program administration was the most important when considering quality and accessibility. Other quality environmental factors included, in order of rating, course delivery, learner involvement, the culture of teaching and learning, and instructional quality. For accessibility, the key environmental factors identified were, in order, course or program administration, course delivery, learner involvement, instructional quality, and the teaching and learning culture.

As illustrated in Tables 1 and 2, results for each environmental factor were compared with each other for quality. The analysis of variance procedures demonstrated no significant differences when comparing any of the factors with others regarding quality, or when considering accessibility.

Those who teach via the Internet were then asked to what extent they were satisfied with the quality of these graduate level courses. A mean was calculated for each survey question related to quality. The overall mean for all items was 3.54 (out of 5, with 1=Strong Dissatisfaction and 5=Strong Satisfaction). Relative frequencies of choices by faculty regarding quality on the Likert-typle scale were also calculated. Of the 25 surveys returned, there were 181 responses (61%) in agreement that Internet

courses were of good quality, whereas 85 responses (29%) disagreed that Internet courses were of good quality (see Table 3). Faculty also generally agreed that Internet delivery made courses more accessible (79% of respondents).

The overall means for both quality and accessibility were divided into two groups: those from respondents who were tenured, and those who were non-tenured. The Kurskal-Wallis one-way ANOVA was used to compare the means from the two groups. The procedure revealed no significant differences at the .05 level (see Table 4).

The final section of the survey asked respondents to identify important areas of research during the next decade. The largest area of concern identified by faculty was student learning and performance (19.6%), followed by pedagogical questions (12%). Other potential research areas included instructional design and learning strategies (8.6% each), socialization factors (6.9%), and computer skills, incorporation of technology, student satisfaction, and assessment and control (all at 5.2%; see Table 5).

Discussion

Distance education has assumed a very real place in American higher education, and the question dealt with in this study is one of method or form, and the result among those responsible for the production of these distance or technology enhanced courses. Faculty, not embracing the idea of being producers of knowledge and learning episodes, offer a clear picture of what they think or believe about distance education through the Internet as a venue for learning. They agreed that learning does

take place, and that this learning is of similar quality when compared to that offered on a traditional campus. Additionally, faculty responded that offering courses over the Internet expanded the accessibility of learning resources, yet they did not refer or infer to the concept of learning support based on the ecology of the campus. Indeed, the idea that students learn from their environment and come to rely on this environment for development plays a major role in student development theory yet is often neglected when considering distance learning alternatives.

Internet instruction has the potential to greatly broaden the accessibility of educational programs, but the philosophical question arises among critics and advocates alike: to what extent should these Internet courses be provided, and by whom? Institutions such as the University of Phoenix, among others, have demonstrated that the market does exist and can flourish. Public and state universities, however, have had more difficulty in justifying attempts at competition beyond state boundaries. The incentive of profit has begun to be introduced in these situations, an incentive often debated in worth on the college campus, particularly in graduate education. Although there is little debate concerning academic program viability standards, the flaunting of programs for profit or to off-set less economically viable programs, has proven problematic for public institutions. The general public perception appears to be one that allows expansive programs to the extent that they satisfy state and regional needs, and have "permission" to expand to national and international boundaries when these markets are satisfied. With increasingly specialized and

fragmented local markets, the ability to serve the nation and world via the distance proves difficult.

The current study reflects on what is happening with graduate programs offered on the Internet, and generally, faculty who teach these courses appear supportive of the idea Further research in this area would be fruitful if it brought together the opposing sides of the argument of Internet graduate education, and explored the rationale for the differences and common ground on which to build negations. Private higher education vendors will not voluntarily sacrifice service to the market of potential graduate students, and public institutions must develop a response strategy or they will find themselves unable to continue competing in the current technologically and knowledge pervasive society of the 21st century.

References

Allen, B. A. (1994). Measurement of factors related to student and faculty satisfaction with video based and interactive television courses in distance learning. Unpublished doctoral dissertation, University of Alabama, Tuscaloosa, AL.

Collins, A. C., & Murphy, P. J. (1987). A new adult student: Learning by interaction satellite. The Journal of the National University Continuing Education Association, 51(2), 32-40.

Deloughry, T. J. (1996). Reaching a 'critical mass.' Chronicle of Higher Education, 42(20), A17, A20.

Eck, J. S. (1996). Public trust: Accountability issues. In J. F. Scmidt (ed.), Distance education: Report by the CSGS task force on teaching at the graduate level. Symposium conducted at the Twenty-Fifth Annual Meeting of the Conference of Southern Graduate Schools, Mobile, AL.

Moore, M. G. (1989). Distance education. A learner's system. Lifelong Learning: An Omnibus of Practice and Research, 12(8), 8-11.

National University Continuing Education Association. (1993). The electronic university: A guide to distance learning. Princeton, NJ: Peterson's Guides.

Schrum, L. (1992). What is distance education? Principal, 71(3), 56-57.

Schmidt, J. F. (1996). Distance education: Report by the CSGS task force on teaching at the graduate level. Symposium conducted at the Twenty-Fifth Annual Meeting of the Conference on Southern Graduate Schools, Mobile, AL.

Thompson, L. M. (1996). Faculty issues: The changing professorate. In J. F. Scmidt (ed.), Distance education: Report by the CSGS Task Force on Teaching at the Graduate Level.

Villela, E. F., & Hu, M. (1991). A factor analysis of variables affecting the retention decision of nontraditional college students. NASPA Journal, 28(4), 334-341.

Table 1

ANOVA Results for Environmental Factor by Quality

Source	df	SS	MS	F-Value	P-Value
Between Groups	4	1.355	0.339	1.54	0.229
Within Groups	20	4.403	0.220		
TOTAL	24	5.757			

Note: Critical value of F at the .05 level is 4.23.

Table 2

ANOVA Results for Environmental Factor by Accessibility

Source	df	SS	MS	F-Value	P-Value
Between Groups	4	1.908	0.477	1.47	0.250
Within Groups	20	6.507	0.325		
TOTAL	24	8.415			

Note: Critical value of F at the .05 level is 4.23.

Table 3

Overall Measures of Quality of Graduate Courses via Internet Delivery

Variable	Mean	SD	Median	Number	Percent
Overall Quality Mean	3.54	.490	3.55	25	
Strong Disagree				21	7.1
Disagree				64	21.6
Undecided				30	10.1
Agree				95	32.1
Strongly Agree				86	29.1

Table 4

Overall Measures of Quality of Courses via Internet - Kruskal Wallis Test Results

Variable	Mean	SD	Median	Number	H	P-value
Tenured	3.531	.710	3.500	11	.09	.763
Non-Tenured	3.452	.438	3.542	14		

Note: The critical value for H for alpha at .05 is 5.991.

Table 4

Overall Measures of Accessibility of Courses via Internet - Kruskal Wallis Test Results

Variable	Mean	SD	Median	Number	H	P-value
Tenured	4.091	.516	4.250	11	.05	.827
Non-Tenured	3.982	.661	4.250	14		

Note: The critical value for H for alpha at .05 is 5.919.